



Case Study

ROLE OF AYURVEDA IN POSTPONING ARTHROPLASTY IN SEVERE DEGENERATIVE JOINT DISEASES

Swathi Padinjakkara^{1*}, Bindu.P.R²

¹PG Scholar, ²Associate Professor, Department of Kayachikitsa, Government Ayurveda College, Thripunithura, Kerala, India.

Article info

Article History:

Received: 24-11-2023

Accepted: 15-12-2023

Published: 31-12-2023

KEYWORDS:

Osteoarthritis,
Ayurveda,
Asthigatha vatha,
Samana snehapana.

ABSTRACT

Degenerative joint disease, also known as osteoarthritis (OA) is a common “wear and tear” disease. Typically, relentless repetitive motion deteriorates structural joints and causes inflammation is the underlying cause of this illness. Although it may affect any joint, it is usually seen in the hands, hips, knees, and spine. Bilateral hip osteoarthritis is described as a non-inflammatory degenerative condition of the hip joint that typically manifests in middle or late life. It is marked by acetabular dysplasia and growth or maturational abnormalities in the femoral neck and head. Pain experienced while moving or carrying weight is a prevalent symptom. As per Ayurvedic classics, the clinical presentation can be understood as *Sandhigatavata* in the initial stages and later as *Asthigathavatha*. Initial presentation includes difficulty in moving joints. Bony pain and joint discomfort are explained as *Sakthi* and *Sandhi Shoolam* and associated with *Theevram balakshayam* [severe weakness]. Internal and external applications of *Sneha* are the main therapeutic modalities explained in *Asthi-majja gatha vatha chikitsa* by *Bruhathrayees*. In *Charaka samhitha*, *Ksheera*, *Basthi* and *Sarpi* with *Thiktha rasa Dravya* are mentioned as the primary treatment along with *Panchakarmas*. Because it is the best of the four *Snehas*, cow's ghee was chosen for the study. According to *Sanskaranuvartana*, *Ghrita* has the ability to change in order to absorb the properties of things that are introduced while retaining its original attributes. Ghee's inherent property, oleate, settles *Vata* and *Pitta* while without raising *Kapha*. Phospholipid bilayers are the core elements of cell membranes. Molecules and ions are unable to directly get into or out of the cell via the lipid layer. We constantly need a lipid medium to go deeper. *Asthi*, *Majja*, and *Sukra* have been considered as deeper *Dhatu*s in Ayurveda. The greatest administration for that is *Samana accha snehapana*. Degenerative joint condition can be effectively treated with traditional *Asthigathavata Chikitsa*.

INTRODUCTION

The word "degeneration" indicates the process of deterioration or decaying. Although many patients perceive the word in this way, radiologists may not have intended to mean this. Degenerative arthritis or degenerative joint disease is other names for osteoarthritis^[1]. Because it can often be brought on by a joint's lifetime wear and tear, it is the most prevalent variety of arthritis. The hands, knees, hips, and spine are the most typical locations to find it.

The small finger joints and the joint at the base of the thumb are the most commonly affected by osteoarthritis in the hand. Bilateral hip osteoarthritis is a non-inflammatory degenerative condition that typically develops in late middle or elderly. It is distinguished by acetabular dysplasia as well as growth or maturational abnormalities in the femoral neck and head. Pain when moving or carrying weight is a prevalent symptom. About 3.3 to 3.6% of people worldwide suffer with OA. It ranks as the 11th most disabling disease in the world, causing moderate to severe disability in 43 million individuals. Every individual exhibits OA in a way that is quite distinct from one person to another. The three classic signs of OA are joint discomfort, stiffness, and restriction of motion. Additionally, patients may experience balance problems and muscle weakness.^[2] Clinical diagnosis

Access this article online	
Quick Response Code	
	https://doi.org/10.47070/ijapr.v11i12.3010
Published by Mahadev Publications (Regd.) publication licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0)	

and can be diagnosed with confidence if the following are present: pain worse with activity and better with rest, age more than 45 years, morning stiffness lasting less than 30 minutes, bony joint enlargement and limitation in range of motion. Both pharmacologic and non-pharmacologic therapies are part of a comprehensive treatment plan for the disease. Staying away from activities that worsen pain or overload the joint, displaying to acquire strength, shedding weight, and making use of braces, splints, canes, or crutches for occupational therapy are some instances of non-pharmacologic medical care. Reducing weight is a critical intervention for individuals who are obese or overweight. Pharmacotherapy of OA includes oral, topical, and/or intraarticular options, Acetaminophen and oral NSAIDs, Intraarticular joint injections are also found to be an effective treatment for OA, especially in a setting of acute pain.

In Ayurveda, the symptomatology of Osteoarthritis can be clinically correlated with features of *Asthigata Vata*. Acharya Charaka described the disease *Asthigatavata* in *Vatavyadhi chikitsa*, where vitiated *Vata* gets localised in *Asthi* producing symptoms like *Sakthi sandhi asthi shoalam*, *Theevram balakshayam*. The treatment modality of *Asthigathavata* is described as *Bahya abhyanthara sneha prayoga*. In *Charaka Samhitha*, *Ksheera*, *Basthi* and *Sarpi* with *Thiktha rasa dravya* is mentioned as the primary treatment along with *Panchakarmas* in the management of *Asthipradoshaja vikaras*. Effect of *Guggulutikthaka ghrtha* is explained by Vagbhata in *Vata vyaadhi prakarana*.

Patient Information

De-identified demographic and other patient information

A 68 year old male patient, native and living in Idukki, Kerala, came to our OPD on 14-10-2022 seeking Ayurvedic treatments for his complaints.

Main Concerns and Symptoms of the Patient

He came with the complaints of difficulty in walking since two months, along with low back ache radiating to left leg with numbness. Walking difficulty was so severe that he could walk only with the support of Walker.

Family and Psychological History Including Relevant Genetic Information

No relevant history in the family relating to the disease.

History of Past Illness

K/C/O Type 2 DM since 2 yrs.

Medical History and Relevant Past Interventions and their Outcomes

Patient was apparently normal 2 months before. He used to travel between Kampam, Idukki and Ernakulam every month. He is working in steam press. 2 months back he came to home after that long travel without any significant physical complaints. That night he woke-up from sleep and tried to walk to toilet. He realised that he could not stand and walk properly. He had to hold the wall and floor to prevent falling while going and coming back from toilet. Next day he consulted District Ayurveda hospital and underwent IP management for 1 month. He got symptomatic relief. But after that he again started standing and walking for long hours. Due to the over activities he developed severe pain movement restrictions and walking difficulty. Later he consulted in medical college where they suggested MRI whole spine and was admitted there for 7 days. They advised to do hip replacement surgery after analysing the MRI reports. At the time of admission in medical college, he was not able to walk and pain was present over knees, thighs and associated with numbness over foot. It was managed symptomatically. But difficulty in walking and inability to stand persisted. He sought Ayurvedic treatment in the hope of avoiding surgery if possible, and for better management.

Clinical Findings

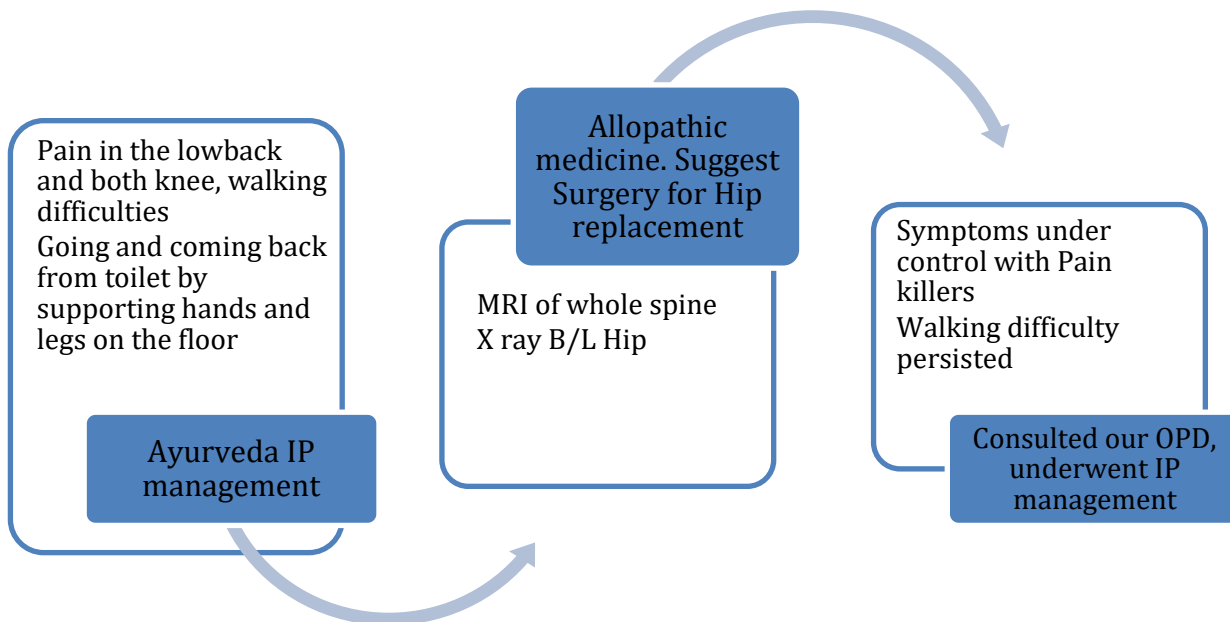
Relevant Physical Examination

At the time of admission, he was found to be overweight with BMI of 30.078kg/m² [Height of 161cm and weight of 77kg.]

Systemic Examination- Locomotor System

- Lumbar Spine: Schober's test +ve
SLR +ve [Right=50° Left= 55°]
- Sacro-Iliac joint: Gaenslen's test = +ve
- Hip joint: Flexion, abduction, external rotation painful more on left leg with VAS 7.
- Knee joint: Crepitus present on both knee, both flexion and extension painful with VAS 7.
- Ankle Joint: Plantar flexion and dorsiflexion was not possible in both sides.

Timeline



Diagnostic Assessments

Diagnostic Methods

Lab Investigations

Erythrocyte sedimentation rate, renal function test, liver function test, lipid profile and urine routine examination were assessed and was within normal limits.

The MRI shows

- Diffuse mild atrophy of paravertebral muscles noted.
- Other degenerative changes as described.
- Multilevel Modic II endplate changes.
- Multilevel anterior and posterior marginal osteophytes over lumbar spine.

Diagnostic Criteria and Outcome Measures

The assessment was done using Womac osteoarthritis index scale^[3].

Diagnostic Challenges

At the time of admission patient walked with support of walker; even though he was not able to step more than 5-6 steps. In that phase there was a confusion related any neurological pathology involved.

Diagnostic Reasoning and Differential Diagnosis

We considered the probable modern diagnosis osteoarthritis (hip) due to the presence of pain, stiffness and locomotor restriction and lumbar spondylitis. Also the patient had balance issues while walking. Osteosclerosis and reduced joint spaces were noted in the X-ray LS spine.

We considered the probable Ayurvedic diagnosis as *Asthigatha vata*, *Pangu* and *Urusthambha*. *Pangu* was considered due to limbing of bilateral lower limbs.

Urusthambha was considered due to the difficulty in walking and lifting upper limb. As the patient got relief with *Snigdha prayoga*, *Urusthambha* was excluded.

Asthigathavatha was considered due to pain the low back, hip joint and knee joint along difficulty in walking and waddling gait.

This case was diagnosed as *Asthigathavatha* based on matching clinical symptoms with textual descriptions.

Prognostic Outlook

Degenerative joint diseases especially osteoarthritis is considered an 'Old person's disease', and is expected to get worse with age. Rapidly progressive joint damage is not common in osteoarthritis. Although about 40% of older people have X-Ray evidence revealing significant OA changes in hip and knee, less than 5% undergo joint replacement surgery^[4].

Therapeutic Interventions

Type of Interventions [Modern Pharmacological]

At the time of Ayurvedic consultation the patient was taking Etocox 90 tablets [NSAID] for 10 days, Gaba 100mg tablet [for neuropathic pain], Vit.D tablet, Tablet metformin 500mg [oral anti-diabetic drug], Tablet Glimpiride 2mg [sulfonylurea class of drugs]

6 Types of intervention [Traditional, Complimentary, Alternative Medicine]

Amapachana (use of digestives), *Udwarthana* (powder massage, *Rukshana*), *Snehana*^[5] (treatment for inducing unctuousness) and *Vasthi* (enema) were done with internal medicines and external therapies along with diet which included early dinner and specific dietary advices like avoiding non-vegetarian

food specifically fish, beef and pork, curd, pickle, dosa, idly and to include boiled vegetables and steamed food like idiyappam, putt during the hospital stay. He was

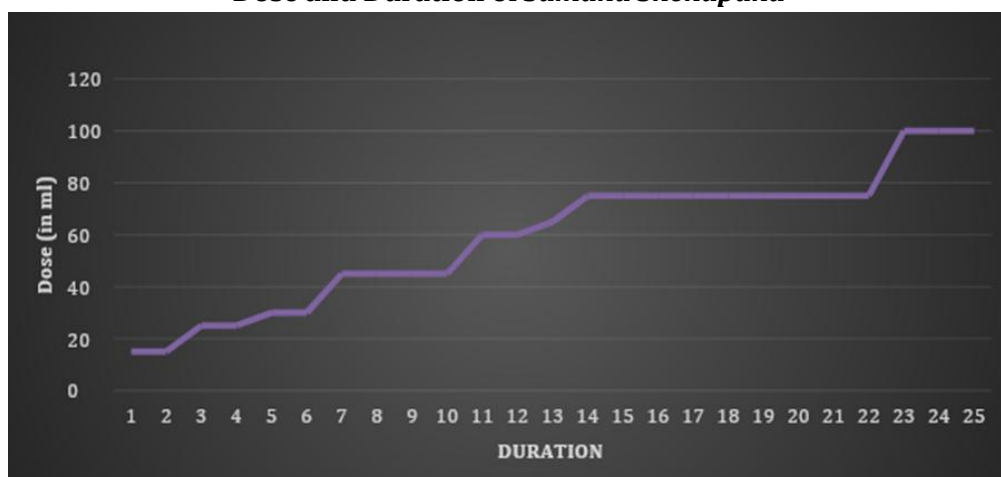
advised to work for extended hours. He was advised not stay awake for long hours in night.

Administration of Therapeutic Intervention

Internal Medicines

Date	Name of medicines	Dose of medicine and time of administration	Remarks
15/10/22	<i>Chirivilwadi kashayam</i> <i>Nishakathakadi kashayam</i> <i>Gorochanadi tablet</i> <i>Ashtavargam kashayam</i> <i>Kaisora guggulu</i>	90ml twice a day before 30 minutes of food intake As Panam-Muhu muhu Two tablet thrice daily after food 90ml <i>Kashaya</i> at 11am and 4pm. 1-0-1 after food	<i>Agnideepanam</i> attained Blood sugar level reduced
24/10/22	<i>Rasna sapthakam Kashaya</i> <i>Nisha kathakadi kashayam</i> <i>Kaisora guggulu</i> <i>Pramehoushadhi tablet</i> <i>Thriphala churna</i>	90ml twice a day 30min before food <i>Muhu muhu</i> 1-0-1 after food 2-0-2 after food 10g with hot water at hour of sleep	Pain reduced significantly
2/11/22	<i>Rasna sapthakam kashayam</i> <i>Nishakathakadi kashayam</i> <i>Kaisora guggulu</i> <i>Thriphala churna</i>	90ml twice daily 30 min before food <i>Muhu muhu</i> 1-0-1 after food 10g HS with hot water	Pain reduced significantly
9/11/22	<i>Sapthasaram Kashaya</i> <i>Shad dharanam tablet.</i> <i>Bruhath thriphala</i>	90ml <i>Kashaya</i> twice a day 30min before food 2-0-2 after food 10g at HS with hot water	<i>Anulomana</i> attained
16/11/22	<i>Snehapana with Guggulu</i> <i>tikthaka ghrutham</i>	Day 1-2: 15ml Day 3-4: 25ml Day 5-6: 30ml Day 7-8: 45ml Day 11-12: 60ml Day 13-22: 75ml Day 23-25: 100ml.	Gait changed Hip flexion possible Gaenslen's test: -ve No tenderness on palpation bilateral knee

Dose and Duration of Samana Snehapana



External Treatments

Date	Procedure	Duration of procedure	Remarks
15/10/22	<i>Udwarthana with Triphala churna</i>	14 days	Gait improved
1/11/22	<i>Vaitharana vasthi</i> <i>Thalam: Rasna jambeeram</i>	5 days	Pain over <i>Kati pradesha</i> reduced significantly
7/11/22	<i>Pichu with Murivenna</i> over low back region	55 days	Improved range of movement of hip
9/11/22	<i>Abhyanga poorva udwarthanam</i> with <i>Triphala churna</i>	7 days	Feels lightness to the body.
	<i>Mathravasthi</i> with <i>Gandharverandam</i> 90ml	7 days	Movements possible without difficulties
11/12/22	<i>Kaala vasthi</i> <i>Snehavasthi: Dhanwantharam mezhuk pakam</i> <i>Kashayavasthi: Dasamoola Panchatikthaka bala ksheera vasthi</i>	15 days	Normal gait attained. Pain reduced 95% while walking.

Changes in Interventions with Explanations

All the modern medication except for Diabetes has been stopped at the time of admission

Nishakathakadi Kashaya (decoction) was given in the form of *Paana* (as drinking water). The other treatments were administered in logical sequence starting with *Rukshana*, *Amapaachana*, followed by *Sneha vasthi* and *Brumhana*.

Treatments during the follow up period

Guggulu tikthakam ghritam 20ml empty stomach with hot water at 6am.

Follow up and Outcomes**Clinician Assessment Outcomes**

Waddling gait completely changed to normal gait.

Before Treatment	After Treatment
<ul style="list-style-type: none"> ➤ WOMAC SCORE = 20 Schober's test +ve Gaenslen's test = +ve • HIP joint: flexion, abduction, external rotation painful more on left leg. • Knee joint: crepitus present on both knee, both flexion and extension painful with VAS 7 ➤ BMI: 30.078 kg/m² ➤ VAS=7 ➤ FBS = 129mg% 	<ul style="list-style-type: none"> ➤ WOMAC SCORE =7 • Hip flexion possible B/L • Gaenslen's test: -ve • No tenderness on palpating B/L knee, hip • Pain reduced 90% while external rotation and internal rotation • No pain felt after flexion and extension of knee joint. ➤ BMI : 26.99 kg/m² ➤ VAS=1 ➤ FBS = 70mg%

Intervention Adherence and Tolerability

Patient adhered to the entire treatment and dietary regimen.

Adverse and Unanticipated Events

No adverse events were reported during the entire course of treatment.

Intervention adherence and tolerability as well as adverse and anticipated events were assessed by interrogation of the patient.

DISCUSSION**Strength and limitations in the approach to treating this case**

As there was significant patient compliance the entire course of the treatment planned has been well adhered to.

Discussion of the relevant medical literature

Discussion on *Samana snehapana* procedure

The case was diagnosed as *Asthigatha vatha* with *Chirakala anubandha*. As per *Asraya asrayi bhava*; *Asthi* is the *Asraya sthana* of *Vayu*. *Asthidhathu* is having more *Khara guna*^[6]. Since *Sneha* is having *Sookshma guna*^[7]; it is the drug of choice for reaching deeper *dhathus* like *Asthi*. Among *Snehadravyas*; *Sarpi* is *Uttama* because it have special quality '*Samskarasya anuvartanam* and also it is *Aajanma saathmyam*'^[8]. As per *Susrutha*, *Ghrutha* is *Alpa abhishyandi*, *Agni Deepana*, *Balakara*^[9] etc. Also for *Asthikshaya chikitsa*; it is told as *Thiktha rasa pradhana ghrutha* or *Ksheera* or *Basthi* should be administered. *Thiktha rasa* will make *Soshana* if it is directly given. In the pathology of degenerative joint disease *Asthi dhatu* has become more porous and there is depletion of *Khara guna*, *Kharatwa* can be imparted with utility of *Thikta rasa*. Since it is a *Vatavyadhi*, *Thikta* will increase *Vata dosha*, to prevent the aggravation of *Vata*, *Thikta rasa* has to be given along with, milk, ghee or in the form of *Vasthi*. In *Ashtanga Hrudaya Vatavyadhi Chikitsa prakarana Guggulu tikthaka ghrutham*^[10] is explained. It is indicated not only in *Prabalam sameeram*, *Sandhi asthi majjagatha vyadhis*, but also in *Prameha*. Among various *Acha snehapana*, *Samana snehapana* is one which can be effectively utilized in the management of *Vata vyadhi*. *Samyak yoga* of *samana Sneha* is *Vyadhi mardhava*. Unlike *Sodhanaanga acha sneha pana* there is no need to increase the dose each day so as to attain *Asatmyata*. Since each cell wall is made up of phospholipid bilayer, the penetration of medicines to each cell can be better attained through a lipid medium. This particular case *Acha samana Sneha* has been given for a period of 25 days. Benefits of *Sneha pana* like *Dhatu Pushti*, *Dhatu bala* and *Vyadhi mardhava* was very evident at the end of *Sneha pana*. The subject could walk without any support and the pain also subsided to a great extent. The waddling gait also resolved. *Kala vasthi* also helped to modify the gait, pain and stiffness, *Thikta ksheera vasthi* was selected for *Nirooha in kala vasthi*. *Vasthi* is helpful in reducing the stiffness and walking difficulty of deformed joints.

The rationale for the Conclusions

In the concept of *Loka purusha samya*, it is stated that any living body is a miniature representing the universe. Universe is maintained by *Soma*, *Surya* and *Anila* as how *Kapha*, *Pitta* and *Vata* are maintaining a body. If *Suryamsha* and *Anila* got increased in the universe, parallel *Chandramsha* will deplete in universe. Similarly in body if *Vata pitta* are getting increased, consequently *Kapha* will drop from normalcy both qualitatively and quantitatively. The *Somamsha* basically giving *Visarga* or *Upachaya*; in its depleted *Avastha* the anabolism will reduce but at the

same time catabolism will occur uncontrollably leads to *Vinaasha* of *Dhatu*s. For preventing the *Vinasha*, restoration of *Somamsha* in body is needed. Degenerative joint diseases are basically *Vatapittadhika Avastha*, in that *Snehamsha* or *Kapha amsha* in the *Sandhis* got depleted and *Nasha* of *Dhatu*s are happening gradually. For reversing that pathology, administration of *Snehamsha* is needed. Administration of *Samana snehapana* in degenerative diseases in fundamentally based on these concepts. Judicious utilisation of Ayurvedic principles is effective in the management of degenerative joint disease and can even postpone or delay the surgery to a greater extent.

Primary take away lessons from this case report

The last resort in cases of severe degenerative diseases is arthroplasty. Patient burden, both in terms of their health and their economic circumstances. It is wise to utilise Ayurveda to put off arthroplasty in cases of severe degenerative joint disorders.

Patient Perspective

It used to be difficult for me to climb even 2-3 steps which I can easily do it now. I was walking with support of walker at the day of admission; but I am able to walk properly now. My flexibility has improved and daily routine is comfortable at present compared to the day of admission. I would say compared to the date of admission I can feel 95% improvement in all my conditions. I am grateful to my doctors and their staff for helping me improve my health. Now he has resumed his old job and started meeting his daily needs by himself.

Informed Consent

Informed consent was obtained from the patient for publication of de-identified medical information.

REFERENCES

1. Bogduk N. Degenerative Joint Disease of the Spine. Radiologic Clinics of North America. 2012 Jul 1; 50(4): 613-28.
2. Osteoarthritis- StatPearls- NCBI Bookshelf [Internet]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK482326>
3. WOMAC Osteoarthritis Index- Physiopedia [Internet]. Available from: https://www.physio-pedia.com/WOMAC_Osteoarthritis_Index
4. The Prognosis for Osteoarthritis [Internet]. Available from: <https://www.verywellhealth.com/what-is-the-prognosis-for-osteoarthritis-2552109>
5. Prof. KR Sreekantamurthy. In: Ashtanga Hridaya. chowkhamba krishnadas academy; (krishnadas series 7; Vol. Chikitsa sthana vatavyadhi).
6. Sri Vaidhya Harischandra kushava. Charaka Samhita. Sree Chakrapanidutta Virachitha Ayurveda dipika commentary. In: 5th ed.

- chowkhambha orientalia, Varanasi; (Chikitsa Sthana).
7. Prof. KR Sreekantamurthy. In: Ashtanga Hridaya. Chowkhamba krishnadas academy; (Krishnadas series 7; Vol. Sutrasthana snehaadhyaya).
 8. Prof. KR Sreekantamurthy. In: Ashtanga Hridaya. Chowkhamba krishnadas academy; (Krishnadas series 7; Vol. Sutrasthana snehaadhyaya).
 9. Prof. KR Sreekantamurthy. In: Susrutha Samhita. Chowkhamba orientalia Varanasi; (Krishnadas series 7; vol. Chikitsa sthana snehaadhyaya).
 10. Prof. KR Srikantamurthy. In: Ashtanga Hrudaya. Chowkhambha orientalis Varanasi; (volume 2).

Cite this article as:

Swathi Padinjakkara, Bindu.P.R. Role of Ayurveda in Postponing Arthroplasty in Severe Degenerative Joint Diseases. International Journal of Ayurveda and Pharma Research. 2023;11(12):49-55.

<https://doi.org/10.47070/ijapr.v11i12.3010>

Source of support: Nil, Conflict of interest: None Declared

***Address for correspondence**

Dr. Swathi Padinjakkara

PG Scholar,

Govt Ayurveda College

Thripunithura, Kerala.

Email: swathiashbin@gmail.com

Ph: 95399 90025

Disclaimer: IJAPR is solely owned by Mahadev Publications - dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. IJAPR cannot accept any responsibility or liability for the articles content which are published. The views expressed in articles by our contributing authors are not necessarily those of IJAPR editor or editorial board members.